

Claims: The following is a listing of all claims in the application with their status and the text of all active claims.

1-36 (CANCELLED)

37. (NEW) An amino acid composition comprising:
- a) an amino acid component having an unpleasant taste comprising one or more amino acids or mixtures thereof, wherein said amino acid is not solely arginine or solely creatine, and
  - b) sucralose in an amount sufficient to mask the unpleasant taste of the amino acid component, comprising, based upon the weight of the amino acid component, from 0.001 to about 15 dry weight % of the amino acid component of the composition.
38. (CURRENTLY AMENDED) The composition of claim 37 wherein sucralose is present in an amount ranging from about 0.1 to about 12 dry weight % of the amino acid component of the composition.
39. (CURRENTLY AMENDED) The composition of claim 37 wherein sucralose is present in an amount ranging from about 0.5 to about 10 dry weight % of the amino acid component of the composition.
40. (CURRENTLY AMENDED) The composition of claim 37 wherein said amino acid component is selected from the group consisting of L-alanine, L-aspartic acid, L-citrulline, L-cystine, L-glutamic acid, L-glutamine, L-histidine, L-isoleucine, L-leucine, L-lysine, L-methionine, D,L-methionine, L-ornithine, L-phenylalanine, L-proline, L-serine, L-threonine, L-tryptophan, L-tyrosine, L-valine, and mixtures thereof.
41. (CURRENTLY AMENDED) The composition of claim 37 wherein said amino acid component additionally comprises an amino acid analog selected from the group consisting of the hydroxy analogs and keto analogs of the amino acids.

42. (CURRENTLY AMENDED) The composition of claim 37 wherein said amino acid component comprises a mixture of L-leucine, L-isoleucine and L-valine.
43. (CURRENTLY AMENDED) The composition of claim 37, wherein said amino acid component is a mixture of amino acids selected from the group consisting of L-histidine, L-isoleucine, L-leucine, L-lysine, L-methionine, L-phenylalanine, L-threonine, L-tryptophan, L-tyrosine and L-valine.
44. (NEW) A protein hydrolysate composition comprising:
- a) a protein hydrolysate component having an unpleasant taste, and
  - b) sucralose in an amount sufficient to mask the unpleasant taste of the protein hydrolysate component, comprising, based upon the weight of the protein hydrolysate component, from 0.001 to about 15 dry weight % of the protein hydrolysate component of the composition.
45. (CURRENTLY AMENDED) The composition of claim 44 wherein sucralose is present in an amount ranging from about 0.1 to about 12 dry weight % of the protein hydrolysate component of the composition.
46. (CURRENTLY AMENDED) The composition of claim 44 wherein sucralose is present in a amount ranging from about 0.5 to about 10 dry weight % of the protein hydrolysate component of the composition.
47. (NEW) A method of masking the unpleasant taste of an amino acid component in an amino acid containing composition, said method comprising adding to a composition containing at least one unpleasant tasting amino acid, sucralose, comprising, based upon the weight of the amino acid component, from 0.001 to about 15 dry weight % of the amino acid component of the composition.

48. (CURRENTLY AMENDED) The method of claim 47 wherein sucralose is added in an amount ranging from about 0.1 to about 12 dry weight % of the amino acid component of the composition.
49. (CURRENTLY AMENDED) The method of claim 47 wherein sucralose is added in an amount ranging from about 0.5 to about 10 dry weight % of the amino acid component of the composition.
50. (CURRENTLY AMENDED) The method of claim 47 wherein said amino acid component is selected from the group consisting of L-alanine, L-aspartic acid, L-citrulline, L-cystine, L-glutamic acid, L-glutamine, L-histidine, L-isoleucine, L-leucine, L-lysine, L-methionine, D,L-methionine, L-ornithine, L-phenylalanine, L-proline, L-serine, L-threonine, L-tryptophan, L-tyrosine, and L-valine, and mixtures thereof.
51. (CURRENTLY AMENDED) The method of claim 47 wherein said amino acid component additionally comprises an amino acid analog selected from the group consisting of the hydroxy analogs and keto analogs of the amino acids.
52. (CURRENTLY AMENDED) The method of claim 47 wherein said amino acid component consists of a mixture of L-leucine, L-isoleucine and L-valine.
53. (CURRENTLY AMENDED) The method of claim 47 wherein said amino acid component is a mixture of amino acids selected from the group consisting of L-histidine, L-isoleucine, L-leucine, L-lysine, L-methionine, L-phenylalanine, L-threonine, L-tryptophan, L-tyrosine and L-valine.
54. (NEW) A method of masking the unpleasant taste of a protein hydrolysate component in a protein hydrolysate containing composition, said method comprising adding to a composition containing an unpleasant tasting protein hydrolysate, sucralose, based upon

the weight of the protein hydrolysate component, from 0.001 to about 15 dry weight % of the protein hydrolysate component of the composition.

55. (CURRENTLY AMENDED) The method of claim 54 wherein sucralose is added in an amount ranging from about 0.1 to about 12 dry weight % of the protein hydrolysate component of the composition.
56. (CURRENTLY AMENDED) The method of claim 54 wherein sucralose is added in a amount ranging from about 0.5 to about 10 dry weight % of the protein hydrolysate component of the composition.

**Claims Objections:****35 USC 102**

Claims 1-5, 8-9, 11-23, 26-27 and 29-36 stand rejected under 35 USC 102 as unpatentable over Ojima et al. (US 7,029,717).

Claims 1-5 have been rewritten as new claim 37-40, claim 8 has been deleted. Claim 9 has been rewritten as new claim 43. Claim 11 has been rewritten as claim 44. Claim 12 has been deleted. Claim 13-14 have been rewritten as new claims 45-46. Claims 15-18 have been deleted. Claim 19 has been rewritten as new claim 47. Claim 20 has been deleted. Claims 21-23 have been rewritten as new claims 48-50. Claim 26 has been deleted. Claim 27 has been rewritten as new claim 53. Claims 29-32 have been deleted. Claims 33-36 have been rewritten as new claims 54-56.

Examiner states that it is “sufficient that the substances such as protein hydrolysates and amino acids coexist with sucralose”, however, applicant notes that the quantities of sucralose required on the basis of the weight of protein hydrolysate or amino acid present invalidates the idea of taste masking by Ojima et al. Applicant notes that Ojima et al uses amino acids in Examples 17, 34, 35 and protein hydrolysates in Example 45. The amount of sucralose in these examples ranges from 91% to 95% on the basis of the amino acid and sucralose content. In other words, to achieve the improved sweetener of Ojima et al., they have used sucralose at 10-100 times the levels of the amino acids or protein hydrolysate.

In Example 17, sucralose (1 parts) is mixed with 0.1 parts of methionine , to give a mixture of amino acid and sucralose that is 91% sucralose and 9% amino acid. Sucralose is 10 times the weight of the amino acid present.

In Example 34, arginine (0.05 parts) was added to sucralose (1part), with sucralose making up 95% of the mixture. Sucralose is 20 times the weight of the amino acid present.

In Example 35, sucralose (10 parts) is mixed with 0.5 parts of arginine , to give a mixture of amino acid and sucralose that is 95% sucralose and 5% amino acid. Sucralose is 20 times the weight of the amino acid present.

These values are far in excess of the amount of sucralose used by Applicant and Applicant submits that these values so exceed the current invention, sucralose being 600 times

sweeter than sugar, that no comparison to the current application exists. Applicant has rewritten the claims to incorporate this distinction.

Ojima et al. used a protein hydrolysate and only demonstrated its retardation of the discoloration of sucralose when sucralose was present at 16.7% of the mixture and the protein hydrolysate at 83.3%. No examination of the effect on taste was demonstrated (Example 45). Applicant notes that sodium glutamate, a commonly used and pleasant tasting amino acid, was evaluated for effectiveness in maintaining the color of the sucralose, but no effect on taste was examined or suggested. Applicant has rewritten the claims to incorporate this distinction.

These quantities of Ojima et al. are in far in excess of the amount of sucralose used by Applicant and Applicant submits that these values so exceed the current invention, sucralose being 600 times sweeter than sugar, that no comparison to the current application exists. Applicant has rewritten the claims to incorporate this distinction.

At Col 17, lines 58-67, Ojima et al., state that “There is no particular limitation on the upper limit from the standpoint of insuring the effect of the invention, although the taste of said defined substance to be used, among other variables, should be taken into consideration” thus clearly demonstrating that the addition of the amino acids, or protein hydrolysates are **not for the purpose of taste masking**, but for achieving the “sweetness-improving effect” (Col 17, line 58) by the addition of small amounts of amino acids to sucralose rather than the reverse as discovered and disclosed by Applicant.

#### **Claim rejections - 35 USC § 102 - Anticipation (New Rejection)**

Claims 1-3, 5-6, 19-21 and 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Grace et al. (US 6,426,077). Claims 1-3 have been rewritten as new claims 37-38. Claims 5-6 have been rewritten as new claims 40-41. Claims 19-21 have been rewritten as new claim 47-48. Claims 21-23 have been rewritten as new claims 48-50.

On examination of the sucralose content as a percentage of the amino acid content in Grace et al., carnitine, at the tables in columns 5 and 6, the sucrose is 116%-150% of the amount of carnitine present. These values are far in excess of the amount of sucralose used by Applicant and Applicant submits that these values so exceed the current invention, sucralose being 600 times sweeter than sugar (col 4, lines 62-67), that no comparison to the current application exists.

As an example of this vast difference, the amino acid solution in Applicant's example 2, would have had to contain 12-16 grams of sucralose, equivalent in sweetness to 9.45 kg of sugar in 400 mL of solution, which would not have even gotten the sugar wet. Applicant has rewritten the claims to incorporate this distinction.

**Claim rejections - 35 USC § 103 - Obviousness (Previous Rejection)**

1) Claims 7, 10, 25, and 28 are rejected under U.S.C. 103(a) as being unpatentable over Ojima et al. (US 7,029,717) in view of Newsholme et al. (US 5,639,731).

Claim 7 has been rewritten as claim 42. Claim 10 had been deleted. Claim 25 has been rewritten as claim 52. Claim 28 has been deleted.

Applicant again points out that Ojima et al. specifically states that the desirable limit for the additive (in Examiner's citation, the amino acid) to sucrose is to be not less than 0.001 part by weight of sucrose, i.e., 99.9% sucrose and 0.1% amino acid, and preferably not less than 0.01 part by weight of sucrose, i.e., 99% sucrose and 1% amino acid (Col 17, line 61-63) or 10 to 100 times the level of the amino acid. Ojima et al. then specifically deny the taste masking effect of the sucralose as they state that, "There is no particular limitation on the upper limit from the standpoint of insuring the effect of the invention, although the taste of said defined substance to be used, among other variables, should be taken into consideration." Ojima et al. clearly recognize in this statement that the amino acid is a minor ingredient and may **adversely** affect the taste of the sucralose rather than the reverse as claimed by Applicant.

Thus Ojima et al. teach that sucralose may be affected by the additive in higher amounts **and did not perceive the present invention**. The specific values of addition of sucralose to the amino acids of Applicant's invention are vastly different from those of Ojima et al., and are added to accomplish taste masking, whereas Ojima et al. clearly state that the taste of the additive, should it be present in amounts different from the range given, 99 - 99.9% sucralose to 0.1-1% amino acid (10 to 100 times the amount of sucralose as the amino acid), would affect the taste of the sucralose. Ojima et al. had no knowledge nor foresight into the taste masking effect of sucralose on an amino acid composition, nor do his observations lead one to experiment with such vast differences.

The combination of Ojima et al. with any other patent is invalid as the taste masking ability of sucralose for the amino acids is in no way anticipated by Ojima et al. nor would it inspire any person of skill in the art to use sucralose as a taste masking agent, since the amino acid use of Ojima et al. would simply be seen as an impurity which might potentially have a bad taste on the sucralose (col 17, lines 57-67).

Newsholme states, "The beverage or instant mixture may also, with the aim of masking the bitter taste of the branched-chain amino acids, contain appropriate flavour or aroma agents in an amount adequate to mask the bitter taste. Such agents are preferably citrus oils or derivatives thereof." To combine this with Ojima et al. is clearly taught against in this patent. However, if the compositions of Ojima et al. are combined with Newsholme, the level of sucralose required in Example 1, for 22 g of amino acids in the example, 2,200 g of sucralose (99% sucralose) would be required in each liter of drink. Since the solubility of sucralose is only 26% (US 5,169,657, col 3, line 33), one skilled in the art would recognize that Ojima et al. and Newsholme could never be combined since such a combination could not be used in a drink. The lowest level of amino acids in the drink of Newsholme is found in Examples 4 and 6 (10 g of amino acids/L), where only 1,000 g of sucralose would be required for combining with the technology of Ojima et al., clearly still impossible for use.

2) Claims 1-5, 8-9, 11-23, 26-27 and 29-36 are rejected under U.S.C. 103(a) as being unpatentable over Daravingas et al. (US 6,235,320) in view of Cherukuri et al. (US 2,013,716).

Claims 1-5 have been rewritten as new claim 37-40, claim 8 has been deleted. Claim 9 has been rewritten as new claim 43. Claim 11 has been rewritten as claim 44. Claim 12 has been deleted. Claim 13-14 have been rewritten as new claims 45-46. Claims 15-18 have been deleted. Claim 19 has been rewritten as new claim 47. Claim 20 has been deleted. Claims 21-23 have been rewritten as new claims 48-50. Claim 26 has been deleted. Claim 27 has been rewritten as new claim 53. Claims 29-32 have been deleted. Claims 33-36 have been rewritten as new claims 54-56.

Daravingas states that, "The starter medium is not generally fortified with growth activators like yeast extract, beef extract, protein hydrolysates because they tend to impart undesirable flavor to the starter and eventually yogurt" (Col 8, line 29-33). Daravingas et al., is well aware that sucralose may be used to sweeten yogurt (Col 8, lines 59-64; col 9, lines 14-17),